WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY (SUPPLEMENTARY SHEET)

International reference PCT/EP2004/006264

The following publications (D) are mentioned in this statement; the numbering is retained in the further proceedings:

D1: DE 35 39 354 A (SENSODEC OY) 14 May 1987 (1987-05-14)
D2: DE 199 13 926 A (VOITH SULZER PAPIERTECH PATENT) 28 September 2000 (2000-09-28)
D3: DE 199 53 189 A (BOSCH GMBH ROBERT) 10 May 2001 (2001-05-10)
D4: EP-A-1 087 212 (KAVLICO CORP) 28 March 2001 (2001-03-28)
D5: US-A-5 771 374 (GELLER HAIM ET AL) 23 June 1998 (1998-06-23)

Re point IV (Unity of invention)

1. The present application contains two sets of claims, which do not satisfy the criterion of unity of invention according to rule 13.1 and 13.2 PCT:

i. Claims 1-14:
Device and method for determining causes of failures in industrial processes

ii. Claims 15-22
Measuring bus system that is independent of the process control bus(es) for retroaction-free data detection in an industrial process.

2. Justification

The said sets of claims (claims 1-14 and 15-22) are only connected by the common features of claims 1 and 14. The subject matter of claim 14 is however not novel in respect of the publication DE 3539354 (D1): D1 discloses a method/device for determining the causes of failures in industrial processes, in particular continuous processes with continuous webs (column 2, lines 18-21 and column 3, lines 41-46), with a detection unit for detecting process variables and the time and/or location of a failure (column 6, lines 12-31 and figure 3), an evaluation unit for determining correlations between detected process variables and the time and/or location of the failure (column 3, lines 41-46) and an output unit for outputting the process

variables correlating with the time and/or location of the failure (column 5, lines 59-67).

Notes:

i) The last feature of claim 14 ("output unit") is not contained in claim 1 and is therefore not relevant to the consideration of unity of invention.

ii) D1 also shows time detection, with time being understood as the progress of the event, as the periodic progress of the process variables and failure variables is detected. Neither claim 1 nor claim 14 explicitly mentions times or time periods. Figure 3 (axis marking "t->") shows explicitly that during detection of the process and failure variables they are detected over time. A time is therefore also detected.

The features therefore do not represent "special technical features" in the sense of rule 13.2 PCT. Also no common inventive concept as required by rule 13.1 PCT can be identified, as claims 1-14 are only concerned with determining the causes of failures, while claims 15-22 only describe details of the measuring bus system. Nor is there an exception according to rule 13.4 PCT therefore, as there is not a reasonable number of dependent claims relating to subject matter that represents an invention per se. Instead all the dependent claims of the two sets of claims show no identical or corresponding features.

Re Point V (Novelty, inventive step, industrial applicability):

1. The subject matter of **claim 1** does not satisfy the novelty requirement (Article 33(2) PCT) compared with D1:

D1 discloses a method for determining causes of failures in an industrial process (column 2, lines 18-21) with process variables and the time and/or location of a failure being detected (column 6, lines 12-31 and figure 3) and correlations being determined between the detected process variables and the time and/or location of the failure (column 3, lines 41-46 and column 5, lines 59-67).

The same reasons and arguments also apply mutatis mutandis to **claim 14**. It is pointed out with reference to column 5, lines 38-67 that a device that "reports" error location must necessarily comprise an output unit (see also establishment of lack of unity of patent).

2. The dependent **claims 2 and 4-9** do not reveal any subject matter that can be judged novel compared with D1 (Article 33(2) PCT). **Claims 10-13 and 15-22** reveal no inventive step compared with D1-D5 or general technical knowledge (Article 33(3) PCT).

With regard to **claims 6 and 13**, it should be noted that in these claims an attempt is made to create a technical distinction by means of non-technical features. Claim 6 is however also already anticipated by D1 (column 3, line 62 - column 4, line 1), while claim 13 offers no inventive contribution over and above the prior art due to lack of technicality.

Claims 11 and 12 also describe characteristics of the failure, not steps of the claimed method. These claims are therefore not appropriate for adding anything inventive to the method.

The features of **claims 15-22** simply represent an agglomeration of known device features, which are obvious to the person skilled in the art in the light of the passages from publications D1 and D3-D5 quoted in the search report. This collection of features does not achieve any unanticipated technical effect, which might justify an inventive step.

3. It should be noted that if an examination of the application is requested according to Chapter II PCT, a positive examination report is only possible, if the subject matter of newly submitted independent claims 1 and 14 differs from the prior art (D1) by means of non-interchangeable technical features, which relate clearly to the disclosed subject matter. In its response the applicant should present well-founded arguments, which show that its new independent claims satisfy the stipulations of Article 33(1)-(3) PCT in respect of the said prior art (D1-D2).

Re point VII (Formal aspects):

1. When formulating the new independent claims, these should be drafted in the two-part form according to rule 6.3b) PCT. The features known in combination with each other from the prior art (D1) should thus be summarized in the pre-characterising clause (rule 6.3b)i) PCT) and the other features should be stated in the characterising portion (rule 6.3b)ii) PCT).

2. The statement of the invention from page 2, line 34 of the description should be brought strictly into line with the content of the new claims.

3. The prior art set out in D1 and D2 should be evaluated in the introduction.

4. When revising the patent claims it should be ensured that the subject matter of the new claims is based on the original documents (Article 41(2)). To this end it is expedient to indicate in the response the original passages on which the changes in the new claims are based.

Re point VIII (Clarity):

Claim 16 is not clear, as it relates to *desideratum*. D3 (column 1, lines 61-68) states with regard hereto that "any" connection option of this nature for conventional systems does not appear technically to be deployable. As claim 16 does not however indicate any technical solution to the problem of any connection to a bus system, such a claim is inadmissible.